



DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Prospective Grant of an Exclusive Patent License: Development and Commercialization of Natural Killer Cell Therapies for Cancer

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The National Cancer Institute, an institute of the National Institutes of Health, Department of Health and Human Services, is contemplating the grant of an Exclusive Patent License to practice the inventions embodied in the Patents and Patent Applications listed in the Supplementary Information section of this notice to Replay Holdings LLC (“Replay”) located in San Diego, California.

DATES: Only written comments and/or applications for a license which are received by the National Cancer Institute’s Technology Transfer Center on or before [INSERT DATE 15 DAYS FROM DATE OF PUBLICATION OF NOTICE IN THE *FEDERAL REGISTER*] will be considered.

ADDRESSES: Requests for copies of the patent application, inquiries, and comments relating to the contemplated an Exclusive Patent License should be directed to: Suna Gulay French, Technology Transfer Manager, Telephone: (240)-276-7424; E-mail: suna.gulay@nih.gov.

SUPPLEMENTARY INFORMATION:

Intellectual Property

Group A

1. United States Provisional Patent Application No. 62/084,654 filed November 26, 2014, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-0-US-01];

2. PCT Patent Application No. PCT/US2015/062269 filed November 24, 2015, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-PCT-01];
3. Australian Patent No. 2015353720 issued June 11, 2020, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-AU-02];
4. Canadian Patent Application No. 2,968,399 effective filing date of November 24, 2015, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-CA-03];
5. Chinese Patent No. ZL201580070673.7 issued November 16, 2021, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-CN-04];
6. European Patent No. 3223850 issued January 8, 2020, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-EP-05];
 - a. Validated in the following jurisdictions: AT, BE, CH, CZ, DE, ES, FR, GB, GR, IE, IT, NL, NO, PL, PT, SE, SI, SK, TR
7. Israeli Patent No. 252258 issued March 2, 2022, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-IL-06];
8. Japanese Patent No. 6863893 issued April 5, 2021, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-JP-07];
9. Korean Patent Application No. 2017-7017289 effective filing date of November 24, 2015, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-KR-08];
10. Mexican Patent No. 384919 issued July 29, 2021, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-MX-09];
11. New Zealand Patent Application No. 732045 effective filing date of November 24, 2015, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-NZ-10];

12. Saudi Arabian Patent No. 7697 issued March 11, 2021, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-SA-11];
13. Singapore Patent Application No. 11201704155U effective filing date of November 24, 2015, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-SG-12];
14. United States Patent No. 11,207,394 issued December 28, 2021, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-US-13];
15. Hong Kong Patent No. 1243642 issued January 22, 2021, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-HK-14];
16. European Patent Application No. 20150279.6 filed January 3, 2020, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-EP-15];
17. Singapore Patent Application No. 10201913978R filed December 31, 2019, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-SG-16];
18. Australian Patent Application No. 2020203465 filed May 26, 2020, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-AU-36];
19. Saudi Arabian Patent Application No. 520420365 filed October 15, 2020, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-SA-37];
20. Hong Kong Patent Application No. 42020021375.9 effective filing date of November 24, 2015, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-HK-38];
21. Japanese Patent Application No. 2021-063092 filed April 1, 2021, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-JP-40];
22. Chinese Patent Application No. 202111263859.8 filed October 27, 2021, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-CN-41];

23. United States Patent Application No. 17/535,318 filed November 24, 2021, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-US-42];
24. Hong Kong Patent Application No. 42022054674.1 filed June 27, 2022, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-028-2015-1-HK-43];
25. United States Provisional Patent Application No. 62/171,321 filed June 5, 2015, entitled “Anti-Mutated KRAS T Cell Receptors” [HHS Reference No. E-180-2015-0-US-01];
26. United States Provisional Patent Application No. 62/218,688 filed September 15, 2015, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-US-01];
27. PCT Patent Application No. PCT/US2016/050875 filed September 9, 2016, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-PCT-02];
28. Australian Patent No. 2016323017 issued February 25, 2021, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-AU-03];
29. Canadian Patent Application No. 2,998,869 effective filing date of September 9, 2016, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-CA-04];
30. Chinese Patent No. ZL201680058891.3 issued October 8, 2021, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-CN-05];
31. European Patent No. 3350213 issued March 31, 2021, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-EP-06];

a. Validated in the following jurisdictions: BE, CH, DE, DK, ES, FR, GB, IE, IT, NL, NO and SE.

32. Israeli Patent Application No. 257840 effective filing date of September 9, 2016, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-IL-07];

33. Japanese Patent Application No. 2018-513423 effective filing date of September 9, 2016, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-JP-08];

34. Korean Patent Application No. 2018-7010326, effective filing date of September 9, 2016, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-KR-09];

35. Mexican Patent Application No. MX/a/2018/003062 effective filing date of September 9, 2016, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-MX-10];

36. New Zealand Patent Application No. 740714 effective filing date of September 9, 2016, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-NZ-11];

37. Saudi Arabian Patent Application No. 518391109 effective filing date of September 9, 2016, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-SA-12];

38. Singapore Patent No. 11201802069U issued March 31, 2022, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-SG-13];

39. United States Patent No. 10,556,940 issued February 11, 2020, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-US-14];

40. Hong Kong Patent No. HK1257902 issued December 24, 2021, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-HK-15];
41. United States Patent Application No. 16/739,310 filed January 10, 2020, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-US-16];
42. Singapore Patent Application No. 10201913868X filed December 30, 2019, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-SG-17];
43. Australian Patent No. 2021200833 issued August 18, 2022, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-AU-18];
44. European Patent Application No. 21162567.8 filed March 15, 2021, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-EP-19];
45. Saudi Arabian Patent Application No. 521421309 filed February 23, 2021, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-SA-20];
46. Chinese Patent Application No. 202111083392.9 filed September 15, 2021, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-CN-33];
47. New Zealand Patent Application No. 779633 filed September 2, 2021, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-NZ-34];

48. Australian Patent Application No. 2022209229 filed July 26, 2022, entitled “T Cell Receptors Recognizing HLA-CW8 Restricted Mutated KRAS” [HHS Reference No. E-265-2015-0-AU-35];
49. United States Provisional Patent Application No. 62/369,883 filed August 2, 2016, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-US-01];
50. PCT Patent Application No. PCT/US2017/044615 filed July 31, 2017, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-PCT-02];
51. Australian Patent Application No. 2017306038 effective filing date of July 31, 2017, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-AU-03];
52. Canadian Patent Application No. 3,032,870 effective filing date of July 31, 2017, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-CA-04];
53. Chinese Patent Application No. 201780059356.4 effective filing date of July 31, 2017, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-CN-05];
54. European Patent No. 3494133 issued July 6, 2022, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-EP-06];
 - a. Validated in the following jurisdictions: AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, HR, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM and TR.
55. Japanese Patent Application No. 2019-505220 effective filing date of July 31, 2017, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-JP-07];

56. United States Patent No. 10,611,816 issued April 7, 2020, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-US-08];
57. Israeli Patent Application No. 264425 effective filing date of July 31, 2017, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-IL-09];
58. Korean Patent Application No. 2019-7005837 effective filing date of July 31, 2017, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-KR-10];
59. Singapore Patent Application No. 11201900654Q effective filing date of July 31, 2017, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-SG-11];
60. Hong Kong Patent Application No. 19133082.8 effective filing date of July 31, 2017, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-HK-12];
61. Hong Kong Patent Application No. 19132196.7 effective filing date of July 31, 2017, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-HK-13];
62. Singapore Patent Application No. 10201913959W filed December 31, 2019, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-SG-14];
63. United States Patent No. 11,208,456 issued December 28, 2021, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-US-15];
64. United States Patent Application No. 17/345,390 filed June 11, 2021, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-US-16];
65. United States Patent Application No. 17/541,619 filed December 3, 2021, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-US-17];

66. Japanese Patent Application No. 2021-199878 filed December 9, 2021, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-JP-18];
67. European Patent Application No. 22182473.3 filed July 1, 2022, entitled “Anti-KRAS G12D T Cell Receptors” [HHS Reference No. E-175-2016-0-EP-19];
68. United States Provisional Patent Application No. 62/560,930 filed September 20, 2017, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-US-01];
69. PCT Patent Application No. PCT/US2018/051641 filed September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-PCT-02];
70. Argentina Patent Application No. P180102695 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-AR-03];
71. Taiwanese Patent Application No. 107133221 filed September 20, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-TW-05];
72. United States Patent No. 11,306,132 issued April 19, 2022, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-US-06];
73. Australian Patent Application No. 2018335274 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-AU-07];
74. Brazilian Patent Application No. BR112020005469-0 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-BR-08];

75. Canadian Patent Application No. 3,076,339 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-CA-09];
76. Chinese Patent Application No. 201880060535.4 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-CN-10];
77. Costa Rican Patent Application No. 2020-0150 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-CR-11];
78. Eurasian Patent Application No. 202090652 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-EA-12];
79. European Patent Application No. 18792591.2 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-EP-13];
80. Israeli Patent Application No. 273254 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-IL-14];
81. Indian Patent Application No. 202047011647 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-IN-15];
82. Japanese Patent Application No. 2020-516422 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-JP-16];

83. Korean Patent Application No. 2020-7011112 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-KR-17];
84. Mexican Patent Application No. MX/a/2020/003117 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-MX-18];
85. New Zealand Patent Application No. 762831 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-NZ-19];
86. Singapore Patent Application No. 11202002425P effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-SG-20];
87. Hong Kong Patent Application No. 62020019700.7 effective filing date of September 19, 2018, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-HK-21];
88. Brazilian Patent Application No. BR122021018418-6 filed September 16, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-BR-22];
89. United States Patent Application No. 17/692,787 filed March 11, 2022, entitled “HLA Class II-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-181-2017-0-US-23];
90. United States Provisional Patent Application No. 62/594,244 filed December 4, 2017, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-US-01];

91. PCT Patent Application No. PCT/US2018/063581 filed December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-PCT-02];
92. Australian Patent Application No. 2018378200 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-AU-03];
93. Brazilian Patent Application No. BR112020011111-2 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-BR-04];
94. Canadian Application No. 3,084,246 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-CA-05];
95. Chinese Application No. 201880087270.7 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-CN-06];
96. Costa Rican Application No. 2020-0287 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-CR-07];
97. Eurasian Application No. 202091335 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-EA-08];
98. European Application No. 18830062.8 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-EP-09];

99. Israeli Application No. 275031 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-IL-10];
100. Indian Application No. 202047026991 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-IN-11];
101. Japanese Application No. 2020-530325 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-JP-12];
102. Korean Application No. 2020-7019185 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-KR-13];
103. Mexican Application No. MX/a/2020/005765 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-MX-14];
104. New Zealand Application No. 765440 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-NZ-15];
105. Singapore Application No. 11202005236Q effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-SG-16];
106. United States Patent Application No. 16/769,144 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-US-17];

107. Hong Kong Patent Application No. 62021026617.2 effective filing date of December 3, 2018, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-HK-18];
108. Brazilian Patent Application No. BR122021024382-4 filed December 2, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-BR-19];
109. United States Patent Application No. 17/931,391 filed September 12, 2022, entitled “HLA Class I-Restricted T Cell Receptors Against Mutated RAS” [HHS Reference No. E-239-2017-0-US-20];
110. United States Provisional Patent Application No. 62/795,203 filed January 22, 2019, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-US-01];
111. Taiwanese Patent Application No. 109102511 filed January 22, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-TW-02];
112. PCT Patent Application No. PCT/US2020/014382 filed January 21, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-PCT-03];
113. Australian Patent Application No. 2020211922 effective filing date of January 21, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-AU-04];
114. Canadian Patent Application No. 3,127,096 effective filing date of January 21, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-CA-05];

115. Chinese Patent Application No. 202080010373.0 effective filing date of January 21, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-CN-06];
116. European Patent Application No. 20705599.7 effective filing date of January 21, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-EP-07];
117. Japanese Patent Application No. 2021-542206 effective filing date of January 21, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-JP-08];
118. Korean Patent Application No. 2021-7026169 effective filing date of January 21, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-KR-09];
119. United States Patent Application No. 17/424,591 effective filing date of January 21, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-US-10];
120. Hong Kong Patent Application No. 62022048432.8 effective filing date of January 21, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-HK-11];
121. Hong Kong Patent Application No. 62022047561.5 effective filing date of January 21, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12R Mutation” [HHS Reference No. E-029-2019-0-HK-12];
122. United States Provisional Patent Application No. 62/975,544 filed February 12, 2020, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-US-01];

123. PCT Patent Application No. PCT/US2021/017794 filed February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-PCT-02];
124. Taiwanese Patent Application No. 110105194 filed February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-TW-03];
125. Australian Patent Application No. 2021221138 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-AU-04];
126. Canadian Patent Application No. 3,168,015 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-CA-05];
127. Chinese Patent Application No. 202180014038.2 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-CN-06];
128. European Patent Application No. 21710730.9 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-EP-07];
129. Indian Patent Application No. 202247050250 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-IN-08];
130. Japanese Patent Application No. 2022-548811 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-JP-09];

131. Korean Patent Application No. 2022-7031175 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-KR-10];
132. Singapore Patent Application No. 11202251837Y effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-SG-11];
133. United Kingdom Patent Application No. 2211733.7 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-GB-12];
134. United States Patent Application No. 17/799,163 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-US-13];
135. Brazilian Patent Application No. BR112022015888-2 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-BR-14];
136. Chilean Patent Application No. 02208-2022 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-CL-15];
137. Colombian Patent Application No. NC2022/0012922 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-CO-16];
138. Israeli Patent Application No. 295252 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-IL-18];

139. Mexican Patent Application No. MX/a/2022/009654 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-MX-19];
140. New Zealand Patent Application No. 790950 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-NZ-20];
141. South African Patent Application No. 2022/08853 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-ZA-21];
142. Cuban Patent Application No. 2022-0044 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-CU-22];
143. Russian Patent Application No. 2022124004 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-031-2020-0-RU-23];
144. United States Provisional Patent Application No. 62/976,655 filed February 14, 2020, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-0-US-01];
145. United States Provisional Patent Application No. 63/060,340 filed August 3, 2020, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-190-2020-0-US-01];
146. PCT Patent Application No. PCT/US2021/017852 filed February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-PCT-01];

147. Taiwanese Patent Application No. 110105193 filed February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-TW-02];

148. Australian Patent Application No. 2021220957 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-AU-03];

149. Canadian Patent Application No. 3,167,382 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-CA-04];

150. Chinese Patent Application No. 202180014281.4 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-CN-05];

151. European Patent Application No. 21710740.8 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-EP-06];

152. Indian Patent Application No. 202247050807 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-IN-07];

153. Japanese Patent Application No. 2022-549088 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-JP-08];

154. Korean Patent Application No. 2022-7031589 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-KR-09];

155. Singapore Patent Application No. 11202251947C effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-SG-10];
156. United Kingdom Patent Application No. 2211757.6 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-GB-11];
157. United States Patent Application No. 17/799,193 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-US-12];
158. Brazilian Patent Application No. BR112022015897-1 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-BR-13];
159. Mexican Patent Application No. MX/a/2022/009825 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-MX-14];
160. New Zealand Patent Application No. 791024 effective filing date of February 12, 2021, entitled “HLA Class I-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-074-2020-1-NZ-15];
161. United States Provisional Patent Application No. 62/981,856 filed February 26, 2020, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-US-01];
162. PCT Patent Application No. PCT/US2021/019775 filed February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-PCT-02];

163. Taiwanese Patent Application No. 110106886 filed February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-TW-03];
164. Australian Patent Application No. 2021225872 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-AU-04];
165. Canadian Patent Application No. 3,169,086 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-CA-05];
166. Chinese Patent Application No. 202180016761.4 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-CN-06];
167. European Patent Application No. 21712694.5 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-EP-07];
168. Indian Patent Application No. 202247052620 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-IN-08];
169. Korean Patent Application No. 2022-7033222 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-KR-10];
170. Singapore Patent Application No. 1120225235K effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-SG-11];

171. United Kingdom Patent Application No. 2212195.8 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-GB-12];
172. United States Patent Application No. 17/802,464 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-US-13];
173. Brazilian Patent Application No. BR112022016661-3 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-BR-14];
174. Mexico Patent Application No. MX/a/2022/010157 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-MX-15];
175. New Zealand Patent Application No. 791348 effective filing date of February 26, 2021, entitled “HLA Class II-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-088-2020-0-NZ-16];
176. United States Provisional Patent Application No. 63/050,931 filed July 13, 2020, entitled “HLA Class II-Restricted DRB T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-165-2020-0-US-01];
177. PCT Patent Application No. PCT/US2021/041375 filed July 13, 2021, entitled “HLA Class II-Restricted DRB T Cell Receptors Against RAS with G12D Mutation” [HHS Ref. No. E-165-2020-0-PCT-02];
178. United States Provisional Patent Application No. 63/052,502 filed July 16, 2020, entitled “HLA Class II-Restricted DRB1*01:01 T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-172-2020-0-US-01];

179. PCT Patent Application No. PCT/US2021/041737 filed July 15, 2021, entitled “HLA Class II-Restricted DRB1*01:01 T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-172-2020-0-PCT-02];
180. United States Provisional Patent Application No. 63/086,674 filed October 2, 2020, entitled “HLA Class II-Restricted DQ T Cell Receptors Against RAS with G13D Mutation” [HHS Ref. No. E-189-2020-0-US-01];
181. PCT Patent Application No. PCT/US2021/053060 filed October 1, 2021, entitled “HLA Class II-Restricted DQ T Cell Receptors Against RAS with G13D Mutation” [HHS Ref. No. E-189-2020-1-PCT-01];
182. Taiwanese Patent Application No. 110136658 filed October 1, 2021, entitled “HLA Class II-Restricted DQ T Cell Receptors Against RAS with G13D Mutation” [HHS Ref. No. E-189-2020-1-TW-02]; and
183. United States Provisional Patent Application No. 63/284,884 filed December 1, 2021, entitled “HLA-A3-Restricted T Cell Receptors Against RAS with G12V Mutation” [HHS Ref. No. E-219-2021-0-US-01].

Group B

1. United States Provisional Patent Application No. 62/565,383 filed September 29, 2017, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-0-US-01];
2. PCT Patent Application No. PCT/US2018/051285 filed September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-PCT-01];
3. Australian Patent Application No. 2018342246 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-AU-02];

4. Brazilian Patent Application No. BR112020006012-7 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-BR-03];
5. Canadian Patent Application No. 3,077,024 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-CA-04];
6. Chinese Patent Application No. 201880074539.8 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-CN-05];
7. Costa Rican Application No. 2020-0170 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-CR-06];
8. Eurasian Application No. 202090757 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-EA-07];
9. European Patent Application No. 18780006.5 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-EP-08];
10. Israeli Patent Application No. 273515 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-IL-09];
11. Indian Patent Application No. 202047013911 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-IN-10];

12. Japanese Patent Application No. 2020-517556 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-JP-11];
13. Korean Patent Application No. 2020-7012344 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-KR-12];
14. Mexican Application No. MX/a/2020/003504 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-MX-13];
15. New Zealand Patent Application No. 763023 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-NZ-14];
16. Singapore Patent Application No. 11202002636P effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-SG-15];
17. United States Patent Application No. 16/651,242 effective filing date of September 17, 2018, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-US-16];
18. Hong Kong Patent Application No. 62020021272.3 filed November 30, 2020, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-HK-17];
19. Brazilian Patent Application No. BR122021018454-2 filed September 16, 2021, entitled “T Cell Receptors Recognizing Mutated P53” [HHS Reference No. E-237-2017-2-BR-18];

20. United States Provisional Patent Application No. 62/867,619 filed June 27, 2019, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-US-01];
21. PCT Patent Application No. PCT/US2020/039785, filed June 26, 2020, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-PCT-02];
22. Taiwanese Patent Application No. 109121744 filed June 26, 2020, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-TW-03];
23. Australian Patent Application No. 2020308004 filed January 6, 2022, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-AU-04];
24. Brazilian Patent Application No. BR112021026408-6 filed December 24, 2021, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-BR-05];
25. Canadian Patent Application No. 3,144,070 filed December 16, 2021, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-CA-06];
26. Chinese Patent Application No. 202080047882.0 filed December 27, 2021, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-CN-07];
27. European Patent Application No. 20742583.6 filed January 27, 2022, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-EP-08];

28. Indian Patent Application No. 202247003029 filed January 19, 2022, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-IN-09];
29. Japanese Patent Application No. 2021-576970 filed December 24, 2021, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-JP-10];
30. Mexican Patent Application No. MX/a/2021/015877 filed December 16, 2021, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-MX-11];
31. Russian Patent Application No. 2022101295 filed January 20, 2022, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-RU-12];
32. Singapore Patent Application No. 11202113949V filed December 15, 2021, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-SG-13];
33. South African Patent Application No. 2022/00598 filed January 12, 2022, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-ZA-14];
34. Korean Patent Application No. 2022-7002872 filed January 26, 2022, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-KR-15];
35. United States Patent Application No. 17/620,942 filed December 20, 2021, entitled “T Cell Receptors Recognizing R175H or Y220C Mutation in P53” [HHS Reference No. E-135-2019-0-US-16];

36. United States Provisional Patent Application No. 63/074,747 filed September 4, 2020, entitled “T Cell Receptors Recognizing R273C or Y220C Mutation in P53” [HHS Reference No. E-173-2020-0-US-01];
37. PCT Patent Application No. PCT/US2021/048786 filed September 2, 2021, entitled “T Cell Receptors Recognizing R273C or Y220C Mutation in P53” [HHS Reference No. E-173-2020-0-PCT-02];
38. Taiwanese Patent Application No. 110132552 filed September 2, 2021, entitled “T Cell Receptors Recognizing R273C or Y220C Mutation in P53” [HHS Reference No. E-173-2020-0-TW-03];
39. United States Provisional Patent Application No. 63/185,805 filed May 7, 2021, entitled “T Cell Receptors Recognizing C135Y, R175H or M237I Mutation in P53” [HHS Reference No. E-101-2021-0-US-01]; and
40. PCT Patent Application No. PCT/US2022/028066 filed May 6, 2022, entitled “T Cell Receptors Recognizing C135Y, R175H or M237I Mutation in P53” [HHS Reference No. E-101-2021-0-PCT-02].

Group C

1. United States Provisional Patent Application No. 62/004,335 filed May 29, 2014, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-US-01];
2. PCT Patent Application No. PCT/US2015/033129 filed May 29, 2015, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-PCT-02];
3. Australian Patent No. 2015266818 issued January 16, 2020, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-AU-03];

4. Brazilian Patent Application No. BR112016027805-4 effective filing date of May 29, 2015, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-BR-04];
5. Canadian Patent Application No. 2,950,192 effective filing date of May 29, 2015, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-CA-05];
6. Chinese Patent No. ZL201580031789.X issued May 4, 2021, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-CN-06];
7. European Patent No. 3149031 issued December 18, 2019, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-EP-07];
 - a. Validated in the following jurisdictions: AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM and TR.
8. Israeli Patent No. 248797 issued September 1, 2021, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-IL-08];
9. Japanese Patent No. 6742991 issued August 19, 2020, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-JP-09];
10. Korean Patent Application No. 2016-7033189 effective filing date of May 29, 2015, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-KR-10];
11. Mexican Patent No. 375379 issued September 25, 2020, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-MX-11];
12. Saudi Arabian Patent No. 7456 issued January 5, 2021, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-SA-12];

13. United States Patent No. 10,174,098 issued January 8, 2019, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-US-13];
14. Hong Kong Patent No. HK1236203 issued January 8, 2021, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-HK-14];
15. United States Patent No. 10,870,687 issued December 22, 2020, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-US-15];
16. European Patent Application No. 19217074.4 filed December 17, 2019, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-EP-16];
17. Australian Patent No. 2019283892 issued May 13, 2021, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-AU-17];
18. Japanese Patent No. 6997267 issued December 20, 2021, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-JP-53];
19. Saudi Arabian Patent Application No. 520412601 filed August 10, 2020, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-SA-54];
20. Hong Kong Patent Application No. 42020020661.3 filed November 24, 2020, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-HK-55];
21. Mexican Patent Application No. MX/a/2020/010035 filed September 24, 2020, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-MX-56];

22. United States Patent No. 11,434,272 issued September 6, 2020, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-US-57];
23. Australian Patent Application No. 2021202227 filed April 13, 2021, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-AU-58];
24. Chinese Patent Application No. 20210399056.9 filed April 14, 2021, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-CN-59];
25. Israeli Patent No. 282518 issued July 2, 2022, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-IL-60];
26. Hong Kong Patent Application No. 42022046605.6 filed January 19, 2022, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-HK-62];
27. Japanese Patent Application No. 2021-203953 filed December 16, 2021, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-JP-63];
28. Israeli Patent Application No. 290655 filed February 16, 2022, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-IL-64];
29. United States Patent Application No. 17/816,496 filed August 1, 2022, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-US-65]; and
30. Korean Patent Application No. 2022-7032043 filed September 15, 2022, entitled “Anti-Human Papillomavirus 16 E7 T Cell Receptors” [HHS Reference No. E-176-2014-0-KR-66].

Group D

1. United States Provisional Patent Application No. 61/535,086 filed September 15, 2011, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-US-01];
2. PCT Patent Application No. PCT/US2012/051623 filed September 11, 2012, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-PCT-02];
3. Australian Patent No. 2012309830 issued July 13, 2017, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-AU-03];
4. Canadian Patent No. 2,848,209 issued June 1, 2021, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-CA-04];
5. European Patent No. 2755997 issued July 4, 2018, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-EP-05];
 - a. Validated in the following jurisdictions: AT, BE, CH, CZ, DE, ES, FR, GB, GR, IE, IT, NL, NO, PL, PT, SE, SI, SK and TR.
6. Japanese Patent No. 6415322 issued October 12, 2018, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-JP-06];
7. United States Patent Application No. 14/344,354 filed March 14, 2014, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-US-07];

8. Chinese Patent Application No. 201280055972.X filed May 14, 2014, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-CN-08];
9. Israeli Patent No. 231323 issued November 30, 2019, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-IL-09];
10. Australian Patent No. 2017204103 issued June 20, 2019, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-AU-10];
11. European Patent No. 3392270 issued August 26, 2020, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-EP-11];
 - a. Validated in: AT, BE, CH, CZ, DE, ES, FR, GB, GR, IE, IT, NL, NO, PL, PT, SE, SI, SK and TR.
12. Chinese Patent Application No. 201811170958.X filed October 8, 2018, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-CN-14];
13. United States Patent No. 11,306,131 issued April 19, 2022, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-US-32];
14. Japanese Patent No. 6855426 issued March 19, 2021, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-JP-33];
15. Hong Kong Patent No. HK1262936 issued June 4, 2021, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-HK-34];

16. Hong Kong Patent Application No. 19129278.8 filed September 6, 2019, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-HK-35];
17. Israeli Patent No. 268157 issued July 30, 2021, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-IL-36];
18. European Patent Application No. 20192082.4 filed July 18, 2019, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-EP-37];
19. Israeli Patent No. 268157 issued June 2, 2022, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-IL-57];
20. Japanese Patent Application No. 2021-043845 filed March 17, 2021, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-JP-58];
21. Canadian Patent Application No. 3,114,877 filed April 13, 2021, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-CA-59];
22. Israeli Patent Application No. 290105 filed January 25, 2022, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-IL-60];
23. United States Patent Application No. 17/691,569 filed March 10, 2022, entitled “T Cell Receptors Recognizing HLA-A1- or HLA-CW7- Restricted MAGE” [HHS Reference No. E-266-2011-0-US-61];

24. United States Provisional Patent Application No. 61/701,056 filed September 14, 2012, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-US-01];
25. PCT Patent Application No. PCT/US2013/059608 filed September 13, 2013, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-PCT-02];
26. Australian Patent No. 2013315391 issued September 21, 2017, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-AU-03];
27. Canadian Patent Application No. 2,884,743 filed September 13, 2013, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-CA-04];
28. Chinese Patent No. ZL201380059102.4 issued September 24, 2021, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-CN-05];
29. European Patent No. 2895509 issued December 4, 2019, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-EP-06];
 - a. Validated in the following jurisdictions: AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM and TR.
30. Israeli Patent No. 237560 issued September 1, 2020, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-IL-07];

31. Japanese Patent No. 6461796 issued January 11, 2019, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-JP-08];
32. Korean Patent No. 2165350 issued October 6, 2020, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-KR-09];
33. Mexican Patent No. 367279 issued August 13, 2019, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-MX-10];
34. United States Patent No. 9,879,065 issued January 30, 2018, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-US-11];
35. Australian Patent No. 2017219019 issued August 22, 2019, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-AU-12];
36. United States Patent No. 10,611,815 issued April 7, 2020, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-US-13];
37. Japanese Patent No. 6728326 issued July 3, 2020, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-JP-14];
38. Australian Patent No. 2019213329 issued June 24, 2021, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-AU-15];

39. Mexican Patent Application No. MX/a/2019/009641 filed August 13, 2019, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-MX-16];
40. European Patent No. 3636665 issued June 29, 2022, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-EP-17];
 - a. Validated in: BE, DK, FR, DE, IT, NL, NO, ES, SE, CH and GB.
41. United States Patent Application No. 16/812,845 filed March 9, 2020, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-US-58];
42. Israeli Patent No. 274003 issued February 1, 2022, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-IL-59];
43. Japanese Patent Application No. 2020-114090 filed July 1, 2020, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-JP-60];
44. Hong Kong Patent Application No. 42020016865.6 filed September 25, 2020, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-HK-61];
45. Korean Patent No. 2303166 issued September 10, 2021, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-KR-62];
46. Australian Patent Application No. 2021203746 filed June 7, 2021, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-AU-63];

47. Japanese Patent Application No. 2021-124003 filed July 29, 2021, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-JP-64];
48. Chinese Patent Application No. 202111028896.0 filed September 1, 2021, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-CN-65];
49. Korean Patent No. 2370307 issued February 28, 2022, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-KR-66];
50. Israeli Patent Application No. 286786 filed September 29, 2021, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-IL-67];
51. Hong Kong Patent Application No. 42022051280.0 filed April 7, 2022, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-HK-68];
52. Korean Patent Application No. 10-2022-7006700 filed February 25, 2022, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-KR-69];
53. European Patent Application No. 22174521.9 filed May 20, 2022, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-EP-70]; and
54. United States Patent Application No. 17/936,006 filed September 28, 2022, entitled “T Cell Receptors Recognizing MHC Class II-Restricted Mage-A3” [HHS Reference No. E-230-2012-0-US-82].

(and U.S. and foreign patent applications claiming priority to the aforementioned applications)

The patent rights in these inventions have been assigned and/or exclusively licensed to the government of the United States of America.

The prospective exclusive license territory may be worldwide, and the field of use may be limited to the following:

“Development, manufacture and commercialization of allogeneic Natural Killer (NK) cell therapy products engineered to express a therapeutic T cell receptor claimed in the Licensed Patent Rights for the treatment or prevention of cancer in humans.

Specifically excluded from this field of use are Natural Killer T (NKT) cell therapy products engineered via viral and non-viral means for the treatment of human cancers, wherein the NKT cell therapy product contains at least 50% NKT cells.”

Intellectual Property Group A is primarily directed to isolated T cell receptors (TCRs) reactive to mutated Kirsten rat sarcoma viral oncogene homolog (KRAS), within the context of several human leukocyte antigens (HLAs). Mutated KRAS, which plays a well-defined driver role in oncogenesis, is expressed by a variety of human cancers, including pancreatic, lung, endometrial, ovarian and prostate. Due to its restricted expression in precancerous and cancerous cells, this antigen may be targeted on mutant KRAS-expressing tumors with minimal normal tissue toxicity.

Intellectual Property Group B is primarily directed to isolated TCRs reactive to mutated tumor protein 53 (TP53 or P53), within the context of several HLAs. *P53* is the archetypal tumor suppressor gene and the most frequently mutated gene in cancer. Contemporary estimates suggest that >50% of all tumors carry mutations in *P53*. Because of its prevalence in cancer and its restricted expression to precancerous and cancerous cells, this antigen may be targeted on mutant P53-expressing tumors with minimal normal tissue toxicity.

Intellectual Property Group C is primarily directed to isolated TCRs reactive to the E7 oncoprotein of Human Papilloma Virus (HPV) type 16, within the context of

HLA-A*02. E7 oncoprotein drives malignant transformation in HPV-infected cells. Due to its specific and constitutive expression in cancer cells, this antigen may be targeted in HPV-positive malignancies, such as cervical carcinoma and oropharyngeal carcinoma, with minimal normal tissue toxicity.

Intellectual Property Group D is primarily directed to isolated TCRs reactive to Melanoma-associated antigens 3, 6 and 12 (MAGE-A3/A6/A12), within the context of multiple HLAs. There are twelve MAGE-A superfamily antigens designated A1-A12. These antigens are among the most commonly expressed cancer testis antigens in a variety of tumors and are associated with poor disease prognosis. They are not expressed on normal cells other than non-MHC expressing germ cells of the testis, which do not generate an immune response. Thus, these antigens may be targeted on MAGE-A-expressing tumors with minimal normal tissue toxicity.

This notice is made in accordance with 35 U.S.C. 209 and 37 CFR part 404. The prospective exclusive license will be royalty bearing, and the prospective exclusive license may be granted unless within fifteen (15) days from the date of this published notice, the National Cancer Institute receives written evidence and argument that establishes that the grant of the license would not be consistent with the requirements of 35 U.S.C. 209 and 37 CFR part 404.

In response to this Notice, the public may file comments or objections. Comments and objections, other than those in the form of a license application, will not be treated confidentially, and may be made publicly available.

License applications submitted in response to this Notice will be presumed to contain business confidential information and any release of information in these license applications will be made only as required and upon a request under the Freedom of Information Act, 5 USC 552.

Dated: December 23, 2022.

Richard U. Rodriguez,

Associate Director,

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